

STATEMENT OF WORK

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Project Title: [Repair Reclaimed Water Main Valves, LAAFB (ACJP082135)]

Project Number: ACJP082135

Work Order: # 51851

Date: [February 11, 2009]

Revision: [Final]

1. SITUATION

[61 CELS has identified the lack of maintenance operational controls for the reclaimed water line in the event of maintenance, breakage, or breach of line.

Proposal is requested from qualified Contractor for Design/Build Project that most efficiently and economically addresses a solution to the statement above. This project is a Design/Build Project.

2. DEFINITIONS

61 CELS: Los Angeles Air Force Base Civil and Logistics Squadron

61 CONS: Los Angeles Air Force Base Contracts Squadron

Architect-Engineer (A-E): Contractor or direct subcontractor to the Contractor that will be the Architect-Engineer for the project.

Beneficial Occupancy Date (BOD): Date when the building in part or whole is complete and turned over by the Contractor to the Government.

CE Inspector: The onsite (or field) Government representative during the construction phase of the project.

CE Project Engineer (PE): The Government technical lead for the project.

Contract Administrator (CA): The Government contractual interface for the project.

Contract Documents: The drawings, specifications, and other supporting documentation developed during the Design Phase of the project to be used in the Construction Phase of the Project.

Contracting Officer (CO): The Government contracts representative with authority over the Contract.

Contractor: The entity entering into a contract agreement directly with Government to perform the work under this Statement of Work

Design/Build Project: A project where a single Contractor is contracted to provide both the design and construction services for the execution of the Project

General Contractor: The Contractor or direct subcontractor to the Contractor that will be responsible for the construction phase of the project.

Issued for Construction (IFC): The Contract Documents that are ready to be turned over to the General Contractor for execution of the Construction Phase of the project

Notice to Proceed (NTP): The written notification from the Contracting Officer directing the Contract to proceed with project/phase of the work.

Subcontractor: A lower tier contractor entering into a contract agreement with a higher tier contractor

3. SCOPE OF WORK

3.1. General Scope of the Project to be performed includes but is not limited to the following:

3.1.1. Review pertinent utility plans, design, locate and install isolation water valves per applicable Air Force and Current Building Codes.

3.2. Detailed Scope of Work is described in the attached Appendix A. Install isolation gate valves on main Reclaimed water main pipe lines. Engineering contractor shall coordinate selection of isolation location with base Civil Engineering PM, Base Plumber, and Base Fire Chief, as well as comply with AFI 32-1066, sec. 4.6.3 as applicable. *(4.6.3. Review plans of new and modified water and plumbing systems to identify and guard against cross connections and other potential sources of contamination or pollution (AFI 48-101, Aerospace Medicine*

Operations). Provides BPM documentation of plan review findings, comments and recommendations as needed.

4. PROPOSAL PROCEDURE

4.1. Design/Build Project: This project will be awarded as a Design/Build project. The Contractor's Proposal documents shall be submitted and received in accordance with 61 CONS requirements. The Contractor submitting a proposal on this project shall be required to submit a proposal that encompasses Architect-Engineer (A-E) costs and the construction costs. These costs shall reflect all associated costs (i.e. overhead, profit, subcontractors, etc.) of both the design and construction. This project shall comply with all federal, state, and local regulations and ordinances, including the appropriate Unified Facility Criteria (UFC) documents. Costs shall reflect compliance with these regulations (i.e. if a geotechnical study stamped by a geotechnical engineer is required, these costs should reflect this study, etc).

4.2. Design Cost Estimate: The design cost estimate shall be submitted utilizing the "Architect/Engineer Estimate" form (Attachment 1) or prior approved equal. The format for the design cost estimate shall indicate, at a minimum, the number of professional, and non-professional labor category hours per discipline (i.e. project management, civil, architectural, structural, mechanical utilities, electrical, CADD management, etc.). Each labor category shall list the corresponding hourly billing rate (Including A-E overhead and profit). The estimate shall also list any applicable subcontractor (i.e. soil analysis services, site survey, etc) costs. In addition to the hours and related costs, a list of deliverables shall be identified including a list of probable drawings, specifications and misc deliverables including calculations and other data.

4.3. Construction Cost Estimate: The construction cost estimate shall be submitted utilizing the "Contractor Cost Estimate" form (Attachment 2) or prior approved equal. The construction cost estimates shall be presented in sufficient detail indicating costs for materials, labor (Los Angeles Prevailing Wage), and equipment required to construct

this project. Cost Estimates should be provided in sections including but not limited to mobilization; demolition; site preparation; site excavation; construction; HVAC testing, air balancing, and commissioning; demobilization; final inspection; and closeout documentation, etc.

5. GENERAL

5.1. Period of Performance: This includes all phases of the project including Design, Construction, and Close-out Phases including all required Government review time.

5.2. Project Schedule: The Contractor shall provide, for approval, an AF Form 3064 or a prior approved alternative, progress schedule to the Contract Administrator within five (5) working days after NTP. Schedule shall be detailed enough to identify all submittals and phases of work including but not limited to design, site mobilization, demolition and excavation activities, construction, hardscape installation, landscaping finishes, clean-up, demobilization, training of service personnel, closeout documents, Operations and Maintenance Manuals and any and all other related activities .

5.3. Submittals: Contractor shall submit all items listed in AF Form 66, Schedule of Submittals, (Attachment 3) for review and approval utilizing the AF Form 3000 as a cover sheet/transmittal.

5.3.1. Text Documents: All text document submittals shall be provided in both hardcopy and electronic formats as noted in AF Form 66. Hardcopies shall include a loose-leaf copy and all additional copies shall be bound volumes. Electronic text document files shall be submitted on CDs or DVDs in the native file format (MS Word, MS Excel, MS Project, etc.) and in a pdf version of the original.

5.3.2. Drawing Documents: All drawing document submittals shall be provided in both hardcopy and electronic formats as noted in AF Form 66. Hardcopies shall include one full-size set of bound drawings and all additional copies shall be half-size sets of bound drawings. Electronic files shall be submitted on CDs or DVDs and include the AutoCAD files as noted in Section 6.2

and a pdf version of each half-size drawing file..

5.4. Permits & Certificates: The Contractor shall obtain and provide to the Government, prior to commencing work, all permits and certificates as required by Federal, State, and/or Local Government agencies

5.5. Conferences / Meetings: Coordination conferences / meetings will be held from time to time as required. The Contractor may request such conference when it is deemed necessary by both parties to clarify the work or expedite the preparation of plans and specifications.

5.5.1. The Contractor shall be responsible for making memorandums of record of any conversations and minutes of any meetings with Government personnel concerning this project and forward one copy of these memorandums/minutes to each party concerned and one copy to the Contract Administrator within five (5) working days of event. Each memorandum shall be numbered consecutively and chronologically, and signed by the Contractor's authorized representative.

5.6. Code Compliance: Unless otherwise stated all design, construction and related activities shall comply with the most stringent applicable federal, state, and local laws, codes, ordinances, and regulations to include, but not limited to, the Department of Defense Unified Facilities Criteria (UFC) 1-200-01 and applicable occupation health and safety standards. Code deficiencies shall be corrected at the expense of the Contractor by repair or replacement as directed and approved by the Contracting Officer (CO).

5.7. Work Hours:

5.7.1. Normal Hours: All work shall be accomplished in such a manner that minimum inconvenience shall be caused to the Government. All work shall be accomplished during normal duty hours of 0730 to 1600 hrs, excluding weekends and Federal holidays. The Contractor shall obtain written approval from the Contracting Officer for any changes to these hours.

5.7.2. Change to Normal Hours: The Government reserves the right to change hours of operation.

5.7.3. Restricted Access: During the course of the contract, certain areas may be restricted or closed to Contractor personnel. The Contractor shall comply with requirements for entry to include signing in or securing an entry badge and or wait for an escort.

5.7.4. Military Exercises: Occasionally, Government forces will conduct various disaster or contingency exercises. Should the Contractor be in an area subject to control, he shall immediately comply with the directions of Security Forces personnel. This may include stoppage of work and immediate departure from the area. The Government is not responsible for any costs associated with these exercises. The Contractor or his designated representative shall immediately inform the CE Inspector and await a clearance to return to the work area.

5.8. Personnel:

5.8.1. Project Manager: The Contractor shall provide a fully qualified Project Manager/Alternate Work Supervisor who shall be available and can be contacted between the hours of 7:00 a.m. to 4:30 p.m., Monday through Friday, except for legal federal holidays. The Contractor shall notify the Contract Administrator (CA) in writing at time of NTP of the names and contact information (i.e. office phone, work cell phone, email, etc) of the Project Manager and his designated representatives. The Project Manager and alternate(s) must be able to read, write, speak and understand English.

5.8.2. Appearance: All construction site Contractor employees shall present a neat appearance and shall wear a sleeved shirt and/or safety clothing with the company name to be easily recognized as a Contractor employee while on Los Angeles Air Force Base property. Reflective construction vest and personal protective equipment shall be worn by all field personnel and field visitors.

5.8.3. Restriction of employees: The Contracting Officer (CO) may restrict the employment under the contract of any Contractor employee, or prospective contract employee, who is identified as a potential threat to the health, safety, security, general well being or operational mission of the installation and its population.

5.8.4. Security: All aspects of the work and personnel involved shall comply with Los Angeles Air Force Base security requirements, including unescorted access. Personnel shall have their own base pass available at all times while working on base. Contractor (this includes himself, employees, contractors, subcontractors, suppliers, etc.) shall be on site at all times when work on this project under their control is being preformed.

5.8.5. Area Clearances/ID: The Contractor shall provide the Contract Administrator a detailed list of all employees (both prime and sub) requiring access to restricted areas for unescorted access. This list shall include the employee's full name (as it appears on their Driver's License/state valid picture identification), citizenship, date of birth, location of birth, social security number, driver's license number, current vehicle registration, and proof of vehicle insurance. These items shall be in their possession at all times to gain entry into the installation. Contractor shall be responsible for obtaining entrance for all workers, contractor, subcontractor, suppliers, etc. The Government and/or its representatives will not sponsor workers, subcontractors, suppliers, etc on to the base.

5.8.6. Photography: No photographs of any type shall be taken at any time without the prior written authorization of the Government.

6. DESIGN PHASE

6.1. Architect-Engineer (A-E): During the Design Phase the A-E through the Contractor is responsible for the development of the Contract Documents and supporting

documentation for the execution of the project. The A-E shall have the necessary professional credentials (i.e. professional licenses / stamps) for the various disciplines required to develop the Contract Documents as outlined in the United Facilities Criteria (UFC). The Contractor shall provide prior to the start of the Design Phase a complete list the professionals that will be sealing and signing the final Contract Documents. This list shall include the professional's name, discipline, licensing jurisdiction, license number, and license expiration date.

6.1.1. A-E shall perform design services including but not limited to conducting interviews with users, field surveys and investigations to develop planning data to base the design; preparing and furnishing a complete set of Contract Documents; and supporting the post design activities during the construction phase of the project.

6.1.2. The A-E shall perform all services required to prepare and furnish complete Contract Documents consisting of drawings, technical specifications, design analysis, material and color selection, and addendums as required for the accomplishment of the project in accordance with requirements of this Statement of Work. Design professionals shall prepare and/or review and approve the design of architectural, structural, mechanical, electrical, civil or other engineering features of the work.

6.2. Contract Documents:

6.2.1. Drawings: All design and as-built drawings shall be well prepared, complete, and accomplished in accordance with best professional practices to clearly and concisely show the type and extent of the work to be performed. All drawings shall be produced in AutoCAD version 2007 DWG format. Later AutoCAD versions may be used with prior approval from the Contracting Officer. The drawings shall be dimensioned completely and accurately. All hard copy drawings shall be drawn to the appropriate scales to clearly and legibly show the type and extent of the work to be performed.

Digital drawings shall be drawn to a scale of 1:1.

6.2.1.1. CAD Standards: The latest A/E/C CADD Standard shall be used to create, name, and populate layers including but not limited to layer color, layer line weight, and layer line type. The A/E/C CADD Standard may be reviewed at <https://tsc.wes.army.mil/products/standards/aec/aecstdweb.asp>. The properties of all CAD drawing objects shall be assigned as "ByLayer" (i.e. a line or polygon will not inherently have a color, line weight, or line type; its layer will determine these properties). In addition, all drawings shall be geographically and spatially accurate and shall use the NAD 83, State Coordinate Plane, Zone 5 (in meters) coordinate system. All CAD files will conform to these standards, unless approved by the Contracting Officer. The Geo-Integration Office through the Contracting Officer (CO) shall address questions concerning these standards.

6.2.1.2. Government Provided Drawings: To ensure the Contractor has the most current site, facility, and infrastructure information available, before commencing any design work, the Contractor shall request as-built plans applicable to the project from the Contracting Officer (CO). If available, the Government shall provide hard copies or digital drawings. Due to the number of legacy files, any AutoCAD drawings provided to the Contractor may or may not comply with the CAD standards set forth in section 6.2.1.1. It is still the responsibility of the Contractor to comply with the standards set forth in section 6.2.1.1 for any modifications or additions to the AutoCAD drawings provided or to any new AutoCAD files submitted by the Contractor. For example, the interior walls provided to the

Contractor in a floor plan may be placed in a layer named "Walls". If the contractor adds a full length interior wall or modifies a full length existing interior wall, the new or modified wall will be placed into a layer named "A-WALL-FULL-INTR" and will comply with all other standards set forth in section 6.2.1.1. In addition, although the Government will provide the most current and accurate drawings available, site conditions may vary from the drawings provided. This does not relieve the Contractor of his responsibility, depending upon the scope of the project, to provide complete and accurate drawings of the work being provided. The Geo-Integration Office through the Contracting Officer (CO) shall address questions concerning these standards.

6.2.2. Technical Specifications: Technical specifications shall be developed to meet Government standards for Contract Documents. Specifications shall be based on the Arcom Masterspec Construction Specifications three part format. When necessary to use manufacturer's name to describe a type of product, include the words "or approved equal". References to owner and the A-E shall not be used in the specifications. Any sections/references pertaining to equipment/items not applicable to this project shall be removed. Project number shall appear at the bottom left side of each page of the specifications.

6.2.3. Design Analysis: The design analysis shall contain results of field investigations and measurements; criteria, detailed calculations, and assumptions used for all aspects of design. All applicable codes and standards including Air Force directives shall be listed. Project number shall appear at the bottom left side of each page of the design analysis.

6.2.4. Submittal Revision Notations for Contract Documents: During the development of both design and

construction drawings, specifications and design analysis, implementation of below annotation method is mandatory:

6.2.4.1. Design drawings shall have alphanumeric (A, B, C, D, etc.) sequence every time the drawings are revised. Each revision shall be duly dated and initialed by the checker and design engineer.

6.2.4.2. Once the drawings have surpassed the 100% design stage and are ready for construction, they shall be reissued as revision 0 (zero) and with IFC (Issued for Construction) notation. The IFC drawings shall be duly dated and initialed by both the checker and design engineer. Drawing hardcopies shall be sealed by licensed architect and/or engineer as appropriate.

6.2.4.3. Any revisions made to the IFC drawings will be identified with numerals (1, 2, 3, 4, etc.) in ascending order and shall be duly dated and initialed by both checker and design engineer

6.3. Submittals:

6.3.1. Preliminary Design Submittal (35 percent): The A-E shall develop the preliminary design phase (35 percent complete and sufficient number and detail to determine the intended depth and completeness of the final plans design completion) to include, but not necessarily be limited to the following:

- **Site Plan** –Show locations of proposed and existing facilities, existing and proposed utility service lines.
- **Floor and Roof Plans** –Plans shall show a pertinent walls, structural members, doors, windows, fixed elements (casework, plumbing fixtures, etc.).
- **Elevations** –Drawings include the elevations of all pertinent interior views including but not limited to water closets. The elevations shall show the proposed interior design including planned materials, all in

sufficient detail to portray the intended interior appearance.

- **Sections** - As required to indicate sections through buildings and/or rooms. Sections shall indicate relationships of all systems
- **Specifications** – The A-E shall provide an outline specification covering the total proposed construction and all major proposed materials and finishes.
- **Design analysis**

6.3.2. Progress Design Submittal (NOT REQUIRED FOR THIS PROJECT). (65 percent): Based on previous data and comments furnished by the Air Force covering the 35 percent submittal, the A-E shall further develop the progress design submittal drawings, specifications, design analysis, finish and material selections, and complete layouts as required, all complete except for minor clarifications or details which may be needed. The submittal shall include, but is not limited to the following:

- **Cover Sheet/Project Location Maps**
- **Index of Drawings**
- **Drawings** – shall include all drawings indicated in 35 percent submittal with any additional required drawings, schedules and details to convey 65 percent complete project.
- **Specifications**
- **Design Analysis**
- **Geotechnical Investigation Report**, if recommended

6.3.3. Issued for Construction Submittal (100 percent): The corrected final design shall include all of the 90 percent documents with all final corrections completed.

- Drawing hardcopies shall be sealed by licensed architect or engineer as appropriate.
- The AutoCAD files shall be submitted as both live cad files and clip-bound versions of each of the drawing.

6.4. A-E Post Design Responsibilities:

6.4.1. Inquiries: The A-E shall be required to provide response to the construction contractors in regard to interpretations of the plans, specifications, submittals, conflicts, and/or discrepancies in the plans, specifications, and other matters of such which may arise. Should there be the need for interpretations, clarifications, review, or changes to the plans or specifications, the A-E shall develop the specific information needed to issue an amendment to the Contract Documents for no additional cost to the Government.

6.4.2. A-E Construction Site Visits: The A-E or his duly authorized representative shall make periodic visits (once per month minimum) to the project site as part of his contract. During these visits the A-E shall gather or perform the necessary data and tests or surveys to support the completion of this project and shall develop and submit to the Contract Administrator (CA) within five (5) working days of visit an Observation Report at the conclusion of each site visit.

7. CONSTRUCTION PHASE

7.1. General Contractor: During the Construction Phase the General Contractor through the Contractor is responsible for the construction of this project based on the IFC Contract Documents. The General Contractor shall have a valid Class B Contractor license with the State of California Licensing Board. All lower tier Subcontractors shall also have valid and appropriate contractor license with the State of California Contractors Licensing Board. The Contractor shall submit to the Contract Administrator (CA) proof of compliance for the General Contractor and all Subcontractors for this item prior arrival on site.

7.1.1. Contractor Responsibility: The Contractor shall be responsible for inspection and verification of all field conditions, inspect related work and adjacent areas prior to bidding and/or commencing work of said contract. All work to be coordinated with CE Inspector prior to the start of any activity. Contractor must report conditions preventing proper execution of work to the Contract Administrator

(CA). Any condition(s) that would require deviation from this specification should be reported to the Contract Administrator (CA). The Contractor shall have supervisory staff on site at all times during the execution of work.

7.1.2. Contractor Means and Methods: The Contractor shall be responsible for construction means, sequences, and appropriate procedures in accordance with acceptable construction practices resulting in a final, complete and useable product.

7.1.3. Commencement of work on site: The Contractor shall not commence with any portion of the construction services until the Project Schedule has been approved and contact has been made with the job CE Inspector through the Contract Administrator (CA), at least five (5) working days prior to onsite work

7.1.4. Work Clearance Request: The Contractor shall request from the CE Inspector a Base Civil Engineering Work Clearance Request (AF Form 103) prior to starting any field work. The AF Form 103 will be initiated and completed by the CE Inspector. Additionally, at the request of the Contractor, notification requirements with local agencies, utility companies, dig alert and/or adjacent properties shall be coordinated with CE Inspector.

7.1.5. Welding, Cutting and Brazing Permit: The Contractor shall request from the CE Inspector an USAF Welding, cutting and Brazing Permit (AD Form 592) prior to starting any work covered by the permit. The AF Form 592 will be initiated and completed by the CE inspector.

7.1.6. Conditions of Work: All efforts shall be made to allow complete access of the work area to the Contractor(s) and subcontractor(s) and maintain the area free of traffic to personnel. Temporary facilities constructed by the Contractor to prevent interruption of normal work activity are subject to approval by Contracting Officer (CO). The Contractor is required to notify the CE Inspector of any drive blocking or street

access restrictions at least five (5) working days prior to modifications.

the Contractor commits to purchasing / fabricating the material.

7.1.7. Interruption of Utility Services, Fire Alarm Systems, Fire Sprinkler, and Intrusion Detection Systems: Utility, communication services, and/or fire security systems are not to be interrupted under any circumstances to make, or relocate connections for any other purpose without the approval of the base Fire Chief and the Contracting Officer (CO). Impairments requests must be made a minimum of fifteen (15) working days in advance and shall be properly coordinated so as to limit the time of disruption to affected occupants. Circumstances may require the interruption be performed after working hours or over a weekend period. Plans shall be submitted for relocation of any fire protection/detection equipment identifying present and proposed location.

7.1.8. Unforeseen Environmental Issues: The Contractor is responsible to notify Government on urgent basis for any unforeseen conditions not previously described, especially environmentally unfriendly conditions so that Government can act upon immediately and minimize construction downtime.

7.2. Construction Submittals:

7.2.1. Work Phasing Plan: Contractor shall submit a preliminary work phasing plan which includes existing facility access, egress, and loading routes. This plan is intended to supplement the project schedule and shall provide the Contractor's preliminary means to maintain facility function throughout the construction period.

7.2.2. Construction Material and Shop Drawing Submittals: At the start of the Construction Phase, the Contractor shall submit a schedule/log listing all of the material and shop drawings that will be utilized in the construction of the project. The Contractor shall submit material data / samples and shop drawings for approval at enough time in advance to allow the Government the opportunity to review and concur before

7.3. Environmental:

7.3.1. Environmental Compliance: The Contractor shall comply, and ensure that all subcontractors comply with all applicable and latest federal, state, county, and local environmental laws and regulations to include, but not limited to: general and specific permit conditions; Air Force Instructions (AFI), policies, guidelines, compliance documents, and management plans. The Contractor shall comply with applicable portions of the latest Environmental Construction Requirements Specification Section 01010 (Attachment 4). The submittals listed in this document are mandatory requirements for environmental management compliance.

7.3.2. Asbestos/Lead Abatement: Los Angeles Air Force Base will provide lead/asbestos survey results to Contractor, where necessary. This survey will be conducted under separate contract. Contractor shall comply with applicable portions of the latest Asbestos Abatement Specification Section 02085 (Attachment 5) and Lead-Based Paint Abatement Specification Section 02086 (Attachment 6) and will be monitored by the Environmental Section of 61 CELS for compliance.

7.4. General

7.4.1. Site Security: The Contractor shall be responsible to provide security for the project site. Means of access shall to be furnished to the CE Inspector.

7.4.2. Fire Prevention: All aspects of the work shall comply with fire regulations, which are available through the CE Inspector. If determined necessary by the base Fire Chief, Contractor shall provide fire watch & provide labor for covering and/or protection of all fire alarm devices as required.

7.4.3. Safety: The applicable Occupational Safety and Health Act (OSHA) standards are incorporated into this contract. The Contractor shall provide 5

working days prior to commencement of work on site a project specific Safety Plan. The Contractor shall provide temporary closures, covers, barricades, signs, and other resources required for the safety of building occupants, construction personnel, base personnel, and visitors. Upon request of the CE Inspector, all safety deficiencies shall be handled by the Contractor in a timely fashion. The Site Safety Plan submitted by the Contractor shall address all of these items. The Government reserves the right to order an immediate stop work notification on a portion and/or the entire construction work site should this person determine that an unsafe work site condition exists.

7.4.4. Sanitary Facilities: The Contractor is responsible for providing adequate sanitation facilities for their employees. The Contractor shall provide an appropriate number of portable restroom facilities, wash stations, and trash receptacles for all employees on site. The Contractor is responsible for providing regularly scheduled maintenance, cleaning, and restocking of the facilities. The Contractor is to coordinate location of these facilities during the Pre-Construction meeting. If the Contractor is not allowed to use portable facilities, Contractor personnel may use the nearest sanitary facility. The location will be identified at the preconstruction meeting. The Contractor shall not use facilities in controlled or restricted areas in accordance with security regulations.

7.4.5. Utilities: All reasonable quantities of utilities will be made available to the Contractor without charge. Any temporary connections or lines that may be required shall be installed, maintained, and removed by the Contractor at his expense but must be approved prior to work by the Contracting Officer (CO).

7.4.6. Water Usage:

7.4.6.1. Main Los Angeles Air Force Base, El Segundo: Water from Los Angeles Air Force Base fire hydrant system is not available for use by the Contractor and for

construction. The Contractor may utilize water, if available, from an existing nearby facility or from an available irrigation connection upon approval of the CE Inspector. If neither of these options is available, the Contractor will be allowed to bring in water to be stored on the construction site.

7.4.6.2. Fort MacArthur, San Pedro:

At Fort MacArthur the Base fire hydrant system is available for use by the Contractor.

7.4.7. Repair/Care: Contractor shall exercise due care to protect existing installations and monuments from damage. During performance of the work, the Contractor shall maintain clean project area(s) daily at his/her expense and at the end of each work day and upon completion of the job. Any damage to the construction site during the project is the responsibility of the Contractor to repair to original condition. This is to include travel paths to the project site. All damaged items are to be replaced with in kind item unless prior approval is obtained from the Contracting Officer (CO).

7.5. Construction:

7.5.1. Material: Unless otherwise specified or noted on drawings or Scope of Work, all material associated to scope of contract shall be new. All damage during or after delivery, installation, and before final inspection shall be the responsibility of the Contractor, and the Contractor, at no additional cost to the Government, shall replace any damaged materials.

7.5.2. Demolition: Contractor may be required to remove or relocate some items not shown on drawings or indicated in the Scope of Work, depending on the equipment manufacturer's specifications and/or recommendations. The cost for such work shall be included in the Contractors Scope.

7.5.3. Removal of Debris: The Contractor is responsible for removal from the site

of including but not limited to excavated soils, vegetation and all trash/construction debris associated with this project. All trash, debris, and refuse caused by the job shall be removed and disposed off base in compliance with State and Local ordinances and shall be deposited in an approved receptacle or container furnished by the Contractor. The job site shall be cleaned at the end of each workday. All debris removed from site shall be recorded and disposal tickets provided to the CE Inspector. All debris should be recycled where possible.

7.5.4. Underground Utilities: All utilities that are buried after installation are to be tested to maximum capacity possible in the presence of the CE Inspector before they can be buried. A 24 hour notice is required to be given to the CE Inspector before the test & inspection. In the case of electrical lines (conduit for electrical lines) only inspection of the conduit is necessary. All utility lines are to be laid on 1 foot of clean fill with 1 foot of clean fill covering. Tracer wire is to be taped to the top of non-metallic lines (water, sewer, storm drain, etc) and the proper caution tape is to be placed at least one foot above the line, on top of the top clean fill layer.

8. CLOSEOUT PHASE

8.1. Pre-Final Inspection: Once substantial construction (90%) has been completed and the Contractor has performed his own in-house inspection with the Contractor's subcontractors and remedied all deficiencies, the Contractor shall notify the Contract Administrator five (5) working days in advance requesting a pre-final inspection. Final acceptance testing of components (i.e. electrical, irrigation, etc) shall be required. Contractor shall submit a final acceptance testing plan to be approved by the CE Inspector prior to final acceptance testing.

8.2. Final Inspection: Upon completion of the findings in the pre-final punch list items a final inspection shall be requested. The Contractor must notify the Contract Administrator (CA) requesting a final inspection.

8.3. Operations and Maintenance Manuals, and Training: The contractor shall provide operations and maintenance manuals for all equipment installed under this contract that requires periodic maintenance as per AF Form 66. Training sessions conducted by the appropriate subcontractor shall occur within 30 days of BOD. The Contractor shall be responsible for videotaping the training and provide copies as per AF Form 66. The contractor shall provide notification to the CE Inspector five (5) working days prior to planned training session.

8.4. Equipment/Workmanship Warranty: The Contractor must provide detailed written documentation of all warranty conditions for the completed job to include all parts, labor, and workmanship (See Attachment 7 for Samples of Contractor and Subcontractor Guarantee – Warranty letters). Description of warranted labor, material, and/or equipment shall include manufacturer name, model and serial numbers. This documentation is to be provided to the Contract Administrator (CA) prior to final invoice. Faulty materials and/or unsatisfactory workmanship occurring during the warranty period shall be corrected and addressed to Contracting Officer (CO) as a warranty call at the Contractor's expense. Warranty period for all work, labor, and materials shall be a minimum of 1 year after issuance of the Beneficial Occupancy Date (BOD).

8.5. DD 1354 Transfer and Acceptance of Real Property: Per UFC-300-08 and the Category Code List (Attachment 8) the Draft (new construction) or Interim (remodel construction and equipment modifications) DD-1354 (Attachment 9) shall be submitted twenty (20) days prior to BOD. The final DD-1354 shall be submitted within thirty (30) days of the BOD.

8.6. Construction Record Drawings: The Contractor shall provide 'red line' hardcopies and AutoCAD files of drawings of any alterations, changes, additions, deletions, deviations, etc to the Issued for Construction (IFC) drawings during construction. The AutoCAD files shall be submitted as both live cad files and clip-bound versions of each of the drawing.

8.7. Additional Computer Aided Design Documents: Contractor shall provide AutoCAD drawings for all custom or

fabricated items provided or installed under this contract. Contractor shall provide CAD drawings from the manufacturer, if available.

(End of Statement of Work)